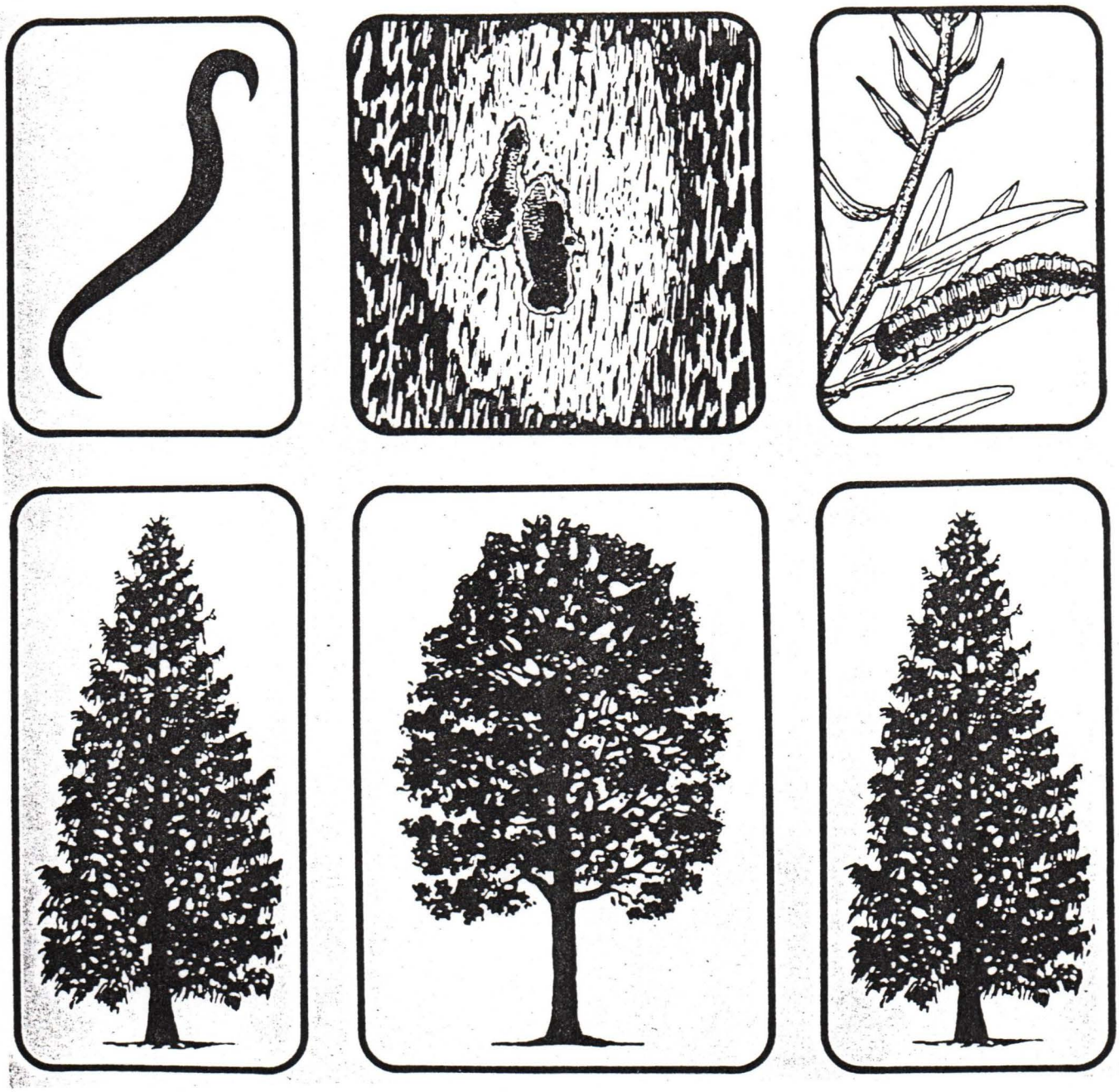
1988 ILLINOIS FOREST PEST REPORT



1988 FOREST PEST REPORT

Cooperating Agencies:

USDA Forest Service
Illinois Department of Conservation
Illinois Natural History Survey
Illinos Department of Agriculture
University of Illinois

Compiled by James E. Appleby
Illinois Natural History Survey

1988 ILLINOIS FOREST PEST REPORT

1988 ILLINOIS FOREST PEST WORKSHOPS AND EXHIBITS

In order to keep Illinois foresters informed on insect and disease problems within the state, annual forestry workshops are held in various districts. In 1988 workshops were held in Oglesby, Champaign, and Benton, Illinois. At these workshops, the life cycles of various insect and disease organisms are discussed. Emphasis is placed upon field recognition of the economically important insects and diseases affecting Illinois forests. Cultural, biologicial and chemical control measures are discussed.

A forest insect exhibit featuring specimens of the bagworm, Zimmerman pine moth, Nantucket pine tip moth, euonymus scale, and eastern tent caterpillar was presented in August at the Illinois State Fair and in January 1989 at the Illinois Nurserymens' Convention. A three page leaflet describing each insect's life history and control measures, and information on pine wilt disease was given to interested persons.

MAPS OF FOREST INSECTS

This report presents information on insects and diseases of forest trees in Illinois during 1988. Some urban forestry insects and diseases are also included. Maps are presented which summarize the distribution of forest and urban forestry insects which have been reported for the years 1986, 1987, and 1988.

If an insect specimen has been verified and deposited in the Illinois Natural History Survey insect collection, that county has the NHS designation. This information may be of value to researchers wishing to construct regional or national distribution maps of insect species.

Persons wishing to send insect specimens that might be added to the collection should include the following information with the specimen: date of collection, county, host plant, and collector's name.

The map lengends used in the report are as follows:

Reports in:

1986

1987

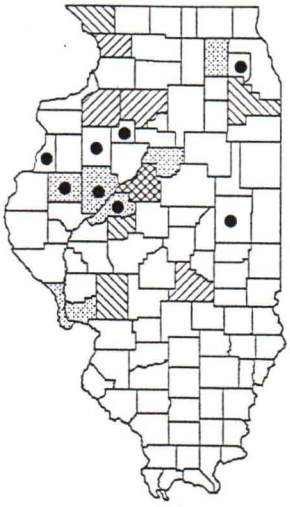
1988

NHS - Voucher specimens from this county reside in the Illinois Natural History Survey Insect Collection. Any combination of the designated map legend patterns may occur on the county map.

Persons contributing insect reports are from the Illinois Departments of Conservation, Agriculture, Natural History Survey, University of Illinois, and members of the Illinois Christmas Tree Growers Association.

EVERGREEN INSECT PESTS

EUROPEAN PINE SAWFLY

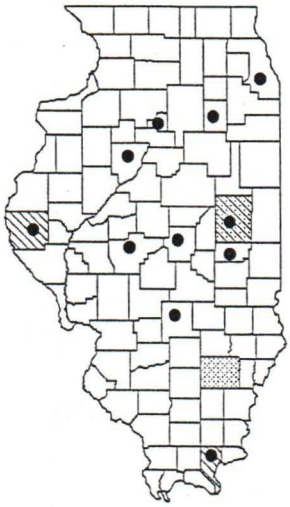


European Pine Sawfly (Neodiprion sertifer)

This sawfly is an important defoliator of Scotch, red, and mugo pines in the northern half of Illinois. Although some reports indicated heavy infestations, most reports seem to indicate that the populations were lighter in 1988 as compared to 1987. Pine plantations should be inspected at weekly intervals during the month of April for infestations.
Control is easily accomplished with insecticide treatments applied when the larvae are small and needle damage at a minimal. Bacillus thuringiensis applications will not control this insect.

Contributors: G. Haley, T. Lamer, R. Timmons, B. McVay, E. Werhanz, and T. Wilson.

BAGWORM



Bagworm (Thyridopteryx ephemeraeformis)

The most severe damage to evergreens usually occurs in the southern half of Illinois. In past years severe damage has occurred in some white pine plantations in extreme southern Illinois. Bacillus thuringiensis applications are very effective in controlling this insect if applied just after all the overwintering eggs have hatched, which is generally late May or early June. Infestations were generally lighter than in 1987.

Contributors: J. Appleby, and D. Johnson.

PINE NEEDLE SCALE

Pine Needle Scale (Chionaspis pinifoliae)

Only one report was received in 1988 indicating a moderate infestation of this scale. Populations appear to be lighter the last several years. Control of this scale is easily accomplished with a spray of malation or diazinon applied in mid-May after all the overwintering eggs have hatched.

Contributor: T. Lamer.

ZIMMERMAN PINE MOTH

Zimmerman Pine Moth (Dioryctria zimmermani)

Scotch, red, and white pine plantings in the northern half of Illinois continue to have infestations of this insect. Infestations range from moderate to heavy. Entire branches and terminal leaders often die on trees with heavy infestations. Chlorpyrifos (Dursban) spray applications in early August and /or early April have shown to give good control.

Contributors: J. Appleby, and R. Eads.

PALES WEEVIL

Pales Weevil (Hylobius pales)

This insect usually is not a problem in plantations where no harvesting has taken place for several years. However, in plantations where harvesting has occurred and where stumps have not been treated, this insect can cause high mortality of seedling trees and severe damage to the branches of larger trees. Most growers are using contol measures and are not having a problem with this insect. Spray applications of chlorpyrifos (Dursban) applied as a stump treatment in early to mid March is advisable if a grower has had problems with this weevil. This same chemical should be applied as a foliar spray just after planting seedlings. In mid-July a chlorpyrifos spray should be applied to the seedlings to protect them from newly emerging adult weevils.

Contributor: J. Appleby

NANTUCKET PINE TIP MOTH

Nantucket Pine Tip Moth (Ryacionia frustrana)

A few Scotch pine plantations in southern Illinois continue to have heavy infestations of this insect. Seedling trees are deformed due to the killing of the terminal buds. A spray of dimethoate (Cygon) applied in late April will give good control.

Contributor: J. Appleby

PINE BARK APHID

Pine Bark Aphid (Pineus strobi)

White pine seedlings can be extremely stunted by infestations of this aphid. On trees that are 7 ft. tall or more, the aphid is usually considered of no economic importance. Insecticide applications of malation or diazinon applied in mid to late March have given good control. Only one report of a moderate infestation was given in 1988.

Contributor: D. Johnson

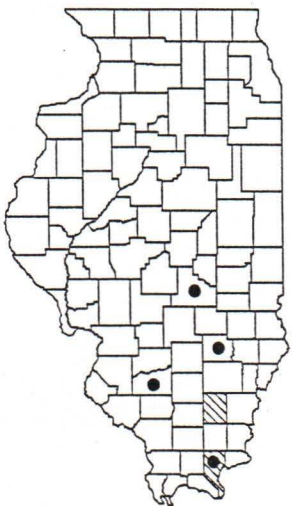
IPS SP.

Ips spp.

Large numbers of Scotch and red pines die each year in Illinois because of pine wilt disease. Trees that are affected by this disease are then invaded by Ips beetles. Ips populations remain high throughout the state.

Contributors: J. Appleby, and R. Eads.

REDHEADED PINE SAWFLY



Redheaded Pine Sawfly (Neodiprion lecontei)

No reports were received concerning infestations of this sawfly in 1988. This is in contrast to 1987 when reports indicated moderate to heavy infestations occurring on Scotch and shortleaf pine in southern Illinois.

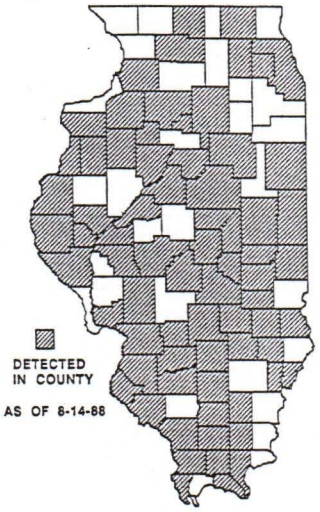
EUROPEAN PINE SHOOT MOTH

European Pine Shoot Moth (Rhyacionia buoliana)

Most growers appear to have this insect under control as few reports of damage have been reported the past several years. A single report of a high infestation was received for the entire year of 1988. A single spray application of dimethoate (Cygon) applied in early July has given excellent control.

Contributors: R. Eads, and B. Slaymaker.

PINEWOOD NEMATODE

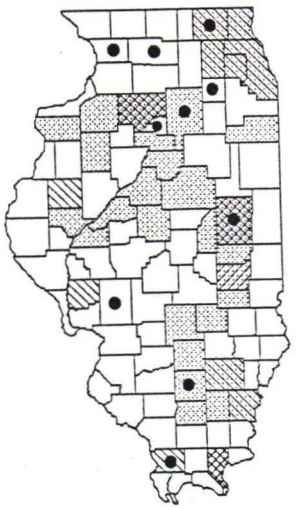


Pinewood Nematode (Bursaphelenchus xylophilus)

Scotch, red, and Austrian pines that are older than 12 years are susceptible to pine wilt disease. Intensity of the disease remains moderate throughout the state. Pine trees that die of pine wilt usually are infested with high populations of Ips, northern pine weevils, pales weevils, and longhorned beetles. The Carolina pine sawyer, Monochamus carolinensis is the primary nematode vector in Illinois. Nematode-infected sawyer beetles often emerge from trees that have died of pine wilt disease. These beetles will then feed on healthy pines, and while feeding the nematodes leave the beetles' bodies and enter the pine through the feeding wounds. Growers are advised to remove and burn dead pines as soon as possible to prevent beetle emergence. Beetle emergence begins in late May and continues until early August.

DECIDUOUS TREE PESTS

EASTERN TENT CATERPILLAR

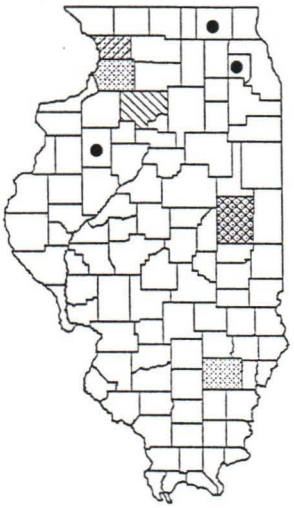


Eastern Tent Caterpillar (Malacosoma americanum)

Populations of this insect were exceedingly abundant throughout the entire state except for the most southern counties. Complete defoliation was evident on most black cherry trees by late April. Populations of this insect have been increasing for the past two years and probably have peaked in 1988. An abundance of insect parasites and disease generally follow population peaks which results in a population crash the following year. In 1989 this insect will probably be in low numbers if it follows the historic record of population trends.

Contributors: J. Appleby, G. Haley, T. Wagner, D. Johnson, S. Felt, E. F. Werhanz, G. Stratton, and T. Gargrave.

BRONZE BIRCH BORER

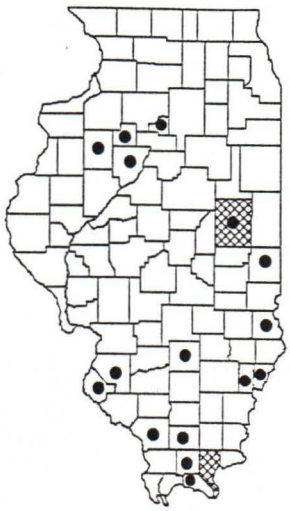


Bronze Birch Borer (Agrilus anxius)

This borer continues to be a very serious insect pest of ornamental birch in Illinois. Trees that kept in a vigorously growing condition with proper fertilization and watering during drought periods appear to be the most likely to survive. The severe drought of 1988 will probably contribute to high populations of this insect in 1989 and probably high birch mortality in 1989. Chlorpyrifos (Dursban) spray applications in late May and three weeks later with proper tree care are practices that are advised for growers of birch in Illinois.

Contributors: J. Appleby, D. Johnson, R. Eads, T. Perry, and R. Zuck.

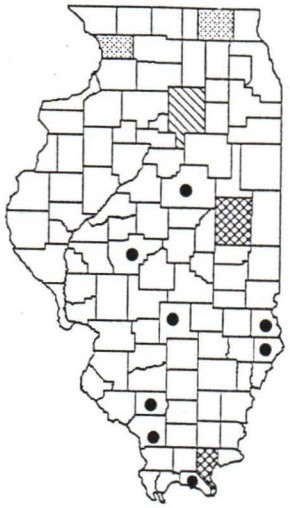
MIMOSA WEBWORM



Mimosa Webworm (Homadaula anisocentra)

For the past several years populations of this insect have been extremely low. In former years the webworm was very destructive to ornamental honey locust and mimosa trees in southern and central Illinois.

ELM LEAF BEETLE

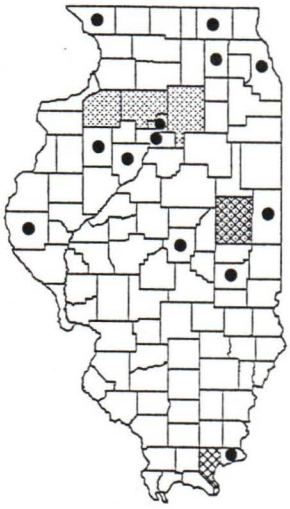


Elm Leaf Beetle (Pyrrhalta luteola)

Severe leaf damage occurred on elms in the urban envionment. In 1987 populations were also high.

Contributors: R. Eads, and E. F. Werhanz.

WALNUT CATERPILLAR



Walnut Caterpillar (Datana integerrima)

Moderate to heavy infestations of the walnut caterpillar occurred on walnut and hichory trees in the northern two-thirds of Illinois. Complete defoliation was evident on some trees by early August. The severe drought throughout most of Illinois combined with defoliation will weaken trees making them more susceptible to secondary insect pests such as insect borers. Growers were cautioned to keep trees in a vigorously growing condition in 1989 to lessen the effects of some of the secondary problems.

Contributors: J. Appleby, J. Roush, R. Timmons.

Gypsy Moth (Lymantria dispar)

In 1988 a total of 6,463 gypsy moth traps were placed throughout Illinois by the Illinois Dept. of Agriculture. Of the 482 moths caught in 1988, these were all caught in 5 northeastern counties. The 1988 state plan was to trap extensively the southern half of Illinois, and some of the Chicago districts. In 1989 the northern half of Illinois will be trapped. The mass trapping and surveys, and the Bacillus thuringiensis spray applications continue to be succesful in keeping the gypsy problem under control in Illinois.